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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,161

02/27/2006

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ITC-331US

2080

23122 7590 12/01/2009
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EXAMINER

LOPEZ, FRANK D

ART UNIT

PAPER NUMBER

3745

MAIL DATE

DELIVERY MODE

12/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,161	Applicant(s) MUELLER, CHRISTIAN	
	Examiner F. DANIEL LOPEZ	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 24 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Applicant's arguments filed July 24, 2009, have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claim 1-24 have been considered but are deemed to be moot in view of the new grounds of rejection. The new grounds of rejection are necessitated by the limitations, including that the lifting device raises and lowers the second member, instead of the first member (e.g. claim 1 line 15-16); and that the first member is movable independently of the lifting device (e.g. claim 1 last line).

Applicant states that Slocum et al does not disclose a limitation that an interior of a first member and a top of the second member defines a variable fluid compartment. The examiner would agree that neither embodiment shows the fluid compartment being defined by a top of the second member, but would assert that the combination of the 2 embodiments results in a fluid compartment which is defined by a top of the second member.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claims 1-24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 last line "said first member is also movable independently of said lifting device" should be connected to the fluid compartment of line 8, since the fluid compartment allows the first member to be moved independently of the lifting device; such as replacing the last line with --wherein said fluid compartment allows said first member is be moved independently of said lifting device--. Claim 6 last line and claim 14 last 2 lines should be similarly changed.

Claim 3 does not appear to further limit claim 2, since there does not appear to be any difference between a lead screw mechanism and a threaded drive mechanism.

In claim 9 line 9-11 “fluidly suspending the test head in a substantially weightless condition by maintaining a fluid pressure in the fluid compartment positioned between the test head and the drive mechanism” should be connected somehow to the limitations of line 3-5, since the fluid flow is how the pressure is maintained. For example, --wherein said flow of fluid maintains a fluid pressure in the fluid compartment, fluidly suspending the test head in a substantially weightless condition; wherein the fluid compartment positioned between the test head and the drive mechanism;-- could be added between lines 5 and 6, with lines 9-11 deleted.

In claim 9 last 2 lines “raising and lowering said member in order to raise and lower said fluid compartment wherein height of said fluid compartment is movable independently of said member” is confusing as to what the height of the compartment is supposed to be, and the first part appears to repeat the limitation of line 7. Perhaps – wherein said fluid compartment allows a height of said test head to be movable independently of said member—can replace the last 2 lines.

In claim 10 line 2-3 “expanding and contracting the fluid compartment using a piston secured to the drive mechanism” is wrong, since the compartment is expanded and contracted by adding and removing fluid from the compartment, not by moving the piston secured to the drive mechanism.

Claim 11 does not further limit claim 9, since the limitation of line 2 “applying an external force” is the same limitation as step b of claim 9 (line 4-5).

In claim 12 and 13 line 2-3 “providing air flow...maintained” should be --wherein said flow of fluid is a flow of air--. The limitation concerning the weightless condition is already in claim 9 (see 112 rejection of claim 9 above).

In claim 14 line 5 “can slide” is not a positive limitation.

In claim 15, 16 and 19 line 2 “the second member includes” should be –the lifting device includes a part of the second member, being--, since these elements are part of the lifting device. In claim 16 and 19 line 2 “can be” is not a positive limitation.

Claims not specifically mentioned are indefinite, since they depend from one of the above claims.

Claim Rejections - 35 USC § 103

Claims 1-17 and 19-21 are rejected under 35 U.S.C. § 103 as obvious over Slocum et al. Slocum et al discloses a first embodiment of a positioning apparatus comprising a support (412) coupled to and supporting a test head (108), attached to a second member; a lifting device, for raising and lowering the second member, including a drive apparatus (406), being at one end of the apparatus, mounted to a base (404) and operating a lead screw mechanism (including 410, 462); and a position sensor for detecting a vertical position of the test head (e.g. column 2 line 46-51); wherein the support and second member is at a second end of the apparatus, above the drive mechanism; but does not disclose a first member at least partially above and movable relative to the second member and independent of the lifting device; a pressure regulator maintaining a pressure within a variable fluid compartment, defined by an interior of the first member and a top of the second member, by allowing feeding or removal of fluid to and from, respectively, the compartment, responsive to a change in pressure , in order to increase or decrease a size of the compartment; wherein the compartment is above the drive mechanism, such that the drive mechanism drives the compartment and test head in a vertical direction;

Slocum et al teaches, for a second embodiment of a positioning apparatus (fig 4B), comprising a support coupled to and supporting a test head, attached to a lifting device, for raising and lowering the support, including a drive apparatus (including 456), operating a lead screw mechanism (including 460), and being at one end of the apparatus; a second member (468) interacts with the lead screw and is near the second end of the apparatus; wherein the support and second member is at a second end of the apparatus, above the drive mechanism; wherein the compartment is above the drive mechanism, such that the drive mechanism drives the compartment and test head in a vertical direction; that the apparatus includes a first member (470), being at a second end of the apparatus and defining a variable fluid compartment (472), in an interior of the first member and a portion of the second member; wherein a pressure regulator (e.g. column 7 line 12-13) maintaining a pressure in the fluid compartment, by allowing feeding or removal of fluid to and from, respectively, the compartment, responsive to a

change in pressure, in order to increase or decrease a size of the compartment, such that the support is movable relative to the first member, independent of the lifting device, such that the test head is suspended in a substantially weightless vertically adjustable position, for providing compliance to the system along the vertical axis (column 7 line 21-22).

Since both embodiments are from the same field of endeavor, the purpose disclosed by the second embodiment would have been recognized in the pertinent art of the first embodiment. It would have been obvious at the time the invention was made to one having ordinary skill in the art to add a first member, to the second end of the apparatus of the first embodiment of Slocum et al, which defines a variable fluid compartment, in an interior of the first member and a portion of the second member; wherein a pressure regulator maintains a pressure in the fluid compartment, by allowing feeding or removal of fluid to and from, respectively, the compartment, responsive to a change in pressure, in order to increase or decrease a size of the compartment, such that the support is movable relative to the first member, independent of the lifting device, such that the test head is suspended in a substantially weightless vertically adjustable position, as taught by the second embodiment of Slocum et al, for providing compliance to the system along the vertical axis.

When the first member is added to the second member of the first embodiment (i.e. by essentially rotating the fig 4b embodiment by 180 degrees, such that the drive is at a bottom position and the first member is at a top position), the support would be attached to the first member, and the fluid compartment would be formed by a top portion (which is a bottom portion before being rotated) of the second member.

Claims 1-17 and 19-21 are rejected under 35 U.S.C. § 103 as obvious over Slocum et al. Slocum et al discloses a second embodiment of a positioning apparatus (fig 4B), comprising a support (412) coupled to and supporting a test head (108), attached to a lifting device, for vertically raising and lowering the support, including a first member (470), being at a bottom end of the apparatus, at least partially below a first member (468), and defining a variable fluid compartment (472), in an interior of the

first member and a bottom portion of the second member; wherein a pressure regulator (e.g. column 7 line 12-13) maintains a pressure in the fluid compartment, by allowing feeding or removal of fluid to and from, respectively, the compartment, responsive to a change in pressure, in order to increase or decrease a size of the compartment, such that the support is movable relative to the first member, independent of the lifting device, such that the test head is suspended in a substantially weightless vertically adjustable position, for providing compliance to the system along the vertical axis (column 7 line 21-22); wherein the lifting device includes a drive apparatus (including 456), operating a lead screw mechanism (including 460), and being at a top end of the apparatus; with the second member interacting with the lead screw; and a position sensor for detecting a vertical position of the test head (e.g. column 2 line 46-51);but does not disclose that the compartment is defined by a top of the second member and is above the drive mechanism; that the first member is at least partially above the second member.

Slocum et al teaches, for a first embodiment of a positioning apparatus comprising a support (412) coupled to and supporting a test head (108), attached to a second member; a lifting device, for raising and lowering the second member, including a drive apparatus (406), being at one end of the apparatus, mounted to a base (404) and operating a lead screw mechanism (including 410, 462); wherein the support and second member is at a second end of the apparatus; that the drive mechanism is below the compartment and test head in a vertical direction.

A comparison of the first and second embodiments by one having ordinary skill in the art would suggest that the lifting device can be oriented, such that the drive mechanism can be either at the top (second embodiment) or at the bottom (first embodiment) of the positioning apparatus. Therefore, It would have been obvious at the time the invention was made to one having ordinary skill in the art to orient the second embodiment of Slocum et al, such that the drive mechanism is at the bootm of the positioning apparatus, as taught by the first embodiment of Slocum et al, since one having ordinary skill in the art would have been able to carry out such a reorientation and the resulting combination would predictably work in the same manner.

When the second embodiment is reoriented (i.e. by essentially rotating the fig 4b embodiment by 180 degrees, such that the drive is at a bottom position and the first member is at a top position), all the limitations would be met by bottom portions becoming top portions and elements being below certain other elements changing to being above those elements.

Conclusion

Claims 18 and 22-24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:00 AM -4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

/F. Daniel Lopez/

F. Daniel Lopez
Primary Examiner
Art Unit 3745
December 1, 2009